

REMARKS

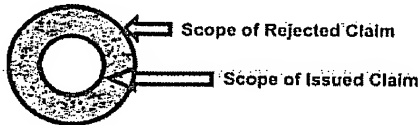
In response to the Office Action dated March 13, 2007, Applicants respectfully request reconsideration and withdrawal of the rejection of the claims. To reduce the issues under consideration, claims 48-50 and 55 are being canceled. Claim 56 is rewritten in independent form, and claims 57 and 58 have been amended to be consistent with the change in claim 56.¹

Reissue claims 11-62 were rejected under 35 U.S.C. §251. The Office Action states that each of the patented independent claims recites language such as "wherein said level difference serves to avoid capillary flow of solder to prevent short-circuiting between the leads adjacent to each other". The Action goes on to conclude that, since this recitation does not appear in the independent claims added via reissue, Applicants are attempting to recapture surrendered subject matter. It is respectfully submitted that, in making this assessment, the Office Action is not employing the correct standard to determine the subject matter that was surrendered.

In essence, the Office Action is taking the position that it is impermissible for a reissue claim to omit a recitation that was added subsequent to a rejection in the original application, under the rule against recapture. In the case of *Ex parte Eggert*, 67 USPQ2d 1716 (Bd. Pat. App. & Inter. 2003), an expanded panel of the Board of Patent Appeals and Interferences was requested to adopt such a position. However, they declined to do so. In reaching their decision, the Board indicated that the subject matter that was *surrendered* by a patentee is measured with reference to the rejected claim that existed *prior* to amendment, rather than the amended claim that issued in the patent.

¹ For the examiner's reference, the Appendix accompanying this response provides marked-up copies of claims 56-58, to illustrate the changes being made relative to the previous version of these claims.

In explaining their decision, the members of the Board employed the following drawing:



Drawing 1

In this drawing, the scope of the rejected claim is the outer circle, and the scope of the amended issued claim is the inner circle. The shaded area between the circles represents subject matter which is narrower than the scope of the rejected claim, but broader than the scope of the issued claim. The Board stated, "the surrendered subject matter is the outer circle of Drawing 1 because it is the subject matter appellants conceded was unpatentable." 67 USPQ2d at 1717. They went on to state that the Examiner was never directly presented with a claim which fell within the scope of the shaded area, and therefore the patentees could not be deemed to have surrendered a claim of that scope. The Board concluded:

the focus for determining the reach of the reissue recapture rule should be the claim from which the issued claimed [sic] directly evolved, not the issued claim itself. 67 USPQ2d at 1718.

The Board also discussed earlier cases pertaining to the rule against recapture. Quoting from *Ball Corp. v. United States*, 729 F.2d 1429, 221 USPQ 289 (Fed. Cir. 1984), the Board stated that this case establishes that "[t]he proper focus is on the *scope* of the claims, not on the individual *feature* or *element* purportedly given up during prosecution of the original application." 67 USPQ2d at 1724 (emphasis in original). With reference to *Mentor Corp. v. Coloplast, Inc.*, 998 F.2d 992, 27 USPQ2d 1521 (Fed. Cir. 1993), the Board quoted "[t]he recapture rule bars the patentee from acquiring, through reissue, claims that are

of the *same* or of *broader scope* than those claims that were cancelled from the original application". *Id.* (emphasis in original).

The following table compares rejected claim 1 of the original application with independent reissue claim 11.

Claim 1	Claim 11 from reissue application
<p>1. A semiconductor element module, comprising:</p> <ul style="list-style-type: none">a package, a semiconductor element arranged on said package; anda plurality of leads provided on sides of the package so that an opening end of each said leads is oriented to the side of a package attaching plane, and serving to connect said semiconductor element to an external circuit; <p>wherein a level differences is provided on the side of said package attaching plane of each of package sides so that a space is formed from each said plurality of leads; and</p> <p>wherein said level difference serves to prevent the short-circuiting between the leads adjacent to each other.</p>	<p>11. A semiconductor element module, comprising:</p> <ul style="list-style-type: none">a package;a semiconductor element within said package;a plurality of leads for connecting said semiconductor element to an external circuit, said plurality of leads each having one end portion attached along a side surface of said package and another open end portion bent in an outward direction relative to the side surface of said package, said open end portion being downwardly protruded from a plane including a bottom surface of said package; anda level difference at the side surface of said package adjacent to the bottom surface of said package so as to form a space between said leads and said package.

From this illustration, it can be seen that reissue claim 11 recites each of the structural components present in original claim 1, namely a package, a semiconductor element, a plurality of leads on a side surface of the package to connect the semiconductor element to an external circuit, and a level difference on the side surface of the package to form a space between the leads and the package. In addition, reissue claim 11 further recites that the leads have an open end portion that is "bent in an outward direction relative to the side surface of said package", and that this open end portion is "downwardly protruded from a plane including a bottom surface of said package", which were not recited in original claim 1. Claim 11 is therefore narrower than the scope of original claim 1 in these respects, i.e. it falls

within the shaded area of the figure from the *Eggert* case. Consequently, Applicants are not attempting to recapture the same subject matter that was surrendered during the examination of the original patent application. In other words, they are not attempting to obtain a claim of the same scope as original claim 1 that was rejected and effectively cancelled.

The one recitation that appears in original claim 1 that is not present in reissue claim 11 is "wherein said level difference serves to prevent the short-circuiting between the leads adjacent to each other." This difference goes to the heart of the error being corrected in this reissue application. As explained in the inventors' Declaration, the subject patent discloses two different concepts that are related to the level difference recited in the claims. One of these concepts is directed to the prevention of short circuiting. Original claim 1 generically recited this concept, and was subsequently amended to specify that this result is achieved by avoiding capillary flow of solder.

The other aspect of the disclosed invention is the mounting height of the semiconductor package, which is often associated with surface-mounted devices. Claim 11 is directed to this concept, separate and apart from the prevention of short circuiting. During the examination of the original patent, Applicants did not surrender their right to claim this reduced-height embodiment of the disclosed subject matter.

When evaluating the rule against recapture relative to the reissue claims, Applicants submit that the case of *B. E. Meyers & Co. v. United States*, 47 Fed. Cl. 200, 56 USPQ2d 1110 (Ct. Claims 2000) is directly on point. In that case, the patentee's original claim recited a generic pulsing circuit as one component in an infrared illuminator. During examination, the claim was amended to recite further details of the pulsing circuit. In a subsequent reissue application, the patentee presented claims directed to a different aspect of the illuminator,

namely the lens system. These claims did not recite the pulsing circuit, either generically or in detail.

In determining the effect of the rule against recapture in this situation, the court stated that, "[i]n order to receive protection for this aspect of its invention, plaintiff had to delete *any* reference to pulsing circuitry in the reissue claims" 47 Fed. Cl. at 207, 56 USPQ2d at 1116 (emphasis in original). It went on to conclude:

[P]laintiff's deletion of the pulsing diode and substantial pulsing current limitations did not effect an improper recapture of surrendered subject matter. The subject matter protected in the new independent reissue claims dealt only with the lens system; it had nothing to do with any type of pulsing circuitry. During the original patent prosecution, the examiner made plaintiff aware that it could not receive protection for its basic pulsing circuit design because such pulsing circuitry was already taught by the prior art. In this regard, nothing changed after the reissue process. Plaintiff still cannot rely on its reissue claims to protect any type of pulsing circuit design that is taught by the prior art, and therefore plaintiff has not used the reissue process to improperly recapture subject matter surrendered during the original prosecution. *Id.*

It is respectfully submitted that the same analysis and conclusion applies in the present application. Applicants are not attempting to recapture the generic concept of preventing short circuiting by means of a level difference, that was recited in original claim 1. There is no reference to that concept in the pending claims being added via reissue. Rather, they are directed to other features that are separate and apart from the subject matter that was surrendered during the examination of the original patent.

For example, each of claims 16, 21, 22, 24, 25, 27, 28, 59, 60 and 61 recites, among other features, that an open end portion of the lead is bent, or oriented, in an outward direction relative to the side surface of the package, and protrudes downwardly from a plane at the bottom surface of the package. Claim 33 recites that the level difference intersects the side surface of the package and is substantially perpendicular to the side surface and a portion of the leads which protrude downwardly therefrom. Claims 35, 38 and 40 recite that the

package has an opening, and that the leads have an uppermost end which is lower than an uppermost end of the opening. Claim 36 recites that the level difference forms a recess away from the exterior surface of the sidewall of the package, with this recess having a width which is greater than the thickness of the sidewall. Claim 38 recites that the surface of the level difference is higher than the inner bottom surface of the package. Claim 40 recites that the surface of the level difference is higher than the bottom surface of a mount on which the optical element is placed. Claims 42 and 45 recite that the open end portion of the leads is shaped to provide a space between the bottom surface of the package and the surface on which the semiconductor element is mounted. Claim 51 recites that at least one of the plurality of leads is connected to a high frequency terminal of the semiconductor element module, and that this lead is surface-mounted onto a conductor pattern on the substrate. Claim 52 recites that the leads have a level difference which defines a transition from a first width to a second width, and that this level difference is located lower than the brazing material that secures the attachment of the leads to the package. Claim 54 recites that each of the leads has a level difference, and is bent at a point below the level difference. Claim 56 (as amended) recites that each of the leads has a wide portion that extends below the bottom edge of the side surface of the package.

This identification of features is not exhaustive of all of the differences between the new reissue claims and the claims of the original application. Rather, it is illustrative of at least one example in which each claim differs from the scope of the original claims. From the foregoing, it can be seen that each of the claims presented for reissue is not of the same, or broader, scope than the claims of the original application that were rejected and amended. Consistent with the holdings of the *Eggert* and *Meyers* cases, Applicants are not attempting to

recapture the same subject matter that was surrendered during the examination of the original application. Withdrawal of the rejection under 35 U.S.C. §251 is respectfully requested.

It is noted that the Office Action indicates that an additional recapture issue is raised by claim 55. In view of the cancellation of claim 55, and the rewriting of claim 56 in independent form, it is respectfully submitted that this additional issue has been rendered moot.

Respectfully submitted,

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APPENDIX
Marked-Up Copy of Amended Claims

56. (Amended) ~~The semiconductor package of claim 55 further including~~ A semiconductor element module, comprising:

a package;

a semiconductor element within said package;

a plurality of leads for connecting said semiconductor element to an external circuit, said plurality of leads each having a wide portion connected to a side surface of said package and a narrow portion that extends downwardly beyond the bottom surface of said package, wherein said wide portion extends below the bottom edge of said side surface, and

a level difference in said side surface of said package adjacent said bottom surface that forms a space between the wide portion of each lead that extends below the bottom edge of said side surface and the bottom of said package.

57. (Amended) The semiconductor ~~package~~ element module of claim 56, further including a brazing material disposed within said level difference for securing the connection of said leads to said package.

58. (Amended) The semiconductor ~~package~~ element module of claim [55] ~~56~~, wherein said narrow portions of said leads are bent outwardly away from said package to form a mounting surface.